

Energy News

Photo © Jennifer Motteler 2013

Energy News Overview

Periodically the United Nation's Intergovernmental Panel on Climate Change (IPCC) issues assessment reports covering the scientific, economic and social information pertaining to climate change. The IPCC's fifth report was to be finalized and released in 2014, but a conservative blogger was able to get a hold of a draft copy and post it on the internet a couple of weeks ago. Climate skeptics were able to extract specific nuggets from the draft document and tout them as evidence that climate change is exaggerated of a hoax. The broad opinion of the report, is that there is now "incontrovertible evidence" that atmospheric concentrations of greenhouse gases have increased in the last 200 years, causing the average temperature of earth's atmosphere and oceans to rise. So much evidence now exists that the draft says scientists are "virtually certain" human activity is the main driver of climate change, which means they are at least 99 per cent sure. In the 2007 fourth IPCC report the figure was lower - 90 per cent - so scientific certainty has increased. See related article on page 5.

The Energy Information Administration reported that excluding Iran the global supply of petroleum would be in deficit relative global demand. Iran is partially sanctioned state because of continuing concerns about its nuclear program, and its oil exports have been declining. Social turmoil in Nigeria, Libya and Iraq is also reducing the global supply of petroleum.

More bad news for the nuclear energy industry this month as Entergy revealed that they would close the Vermont Yankee power plant in 2014, even though the company had secured relicensing in 2011. Entergy cited low power prices caused by the weak economy and low natural gas prices, and the single reactor design of the power plant. Vermont Yankee is the fourth nuclear plant to close this year, reducing the nations total to 99. See related article on page 6.

An interesting article in American Scientist forecast that growing demand for air conditioning in large, crowded and hot countries could be a shock for the global energy supply systems, and overwhelm efforts to combat climate change. The report speculated that demand in India could exceed the US AC demand by 14 times, China would exceed the US by a factor of 5 and Indonesia by a factor of 3. See related article on page 6.

Inside this issue:

Energy News Overview	1
What's Happening in the Energy Office	2
Energy Price Overview	3-5
Energy Headlines	5-6
Recent Reports on Energy and Climate	7
River and Snow Pack	7
Power Exchanged	7
Other Articles	8

What's Happening in the Energy Office

Clean Energy Funding Kickoff

—Tony Usibelli, tony.usibelli@commerce.wa.gov or (360) 725-3110

On August 8, 2013, the State Energy Office at the Washington State Department of Commerce, held a webinar and meeting on the overview of programs and schedules for the clean energy funds. There were over 170 attendees, on the web and in person, wanting to hear how the state funding would be administered and delivered.

Objectives of the programs are job growth, energy efficiency, greenhouse gas reductions, and developing clean energy solutions in state for eventual export. The funding was included in the 2013 state capital budget. The grant agreements will be performance based and focused on a capacity to deliver. Funded programs are:

- Revolving loan fund grants - \$15 million for energy efficiency and renewable energy projects for non-profit lenders.
- Smart grid grants for utilities - \$15 million for energy storage and smart grid grants to Washington state electric utilities.
- Federal grant matching funds - \$6 million in state matching funds for university and research institutions clean energy proposals to the federal government.
- Returning recovery act funds - \$4 million in new energy efficiency and renewable energy loans from returning federal recovery act energy funds.
- Energy efficiency and solar grants for public buildings - \$25 million for higher education, state agencies, and local governments for energy efficiency projects. This fund also sets out \$5 million for solar projects using Washington-manufactured equipment.

For more information visit <http://www.commerce.wa.gov/Programs/Energy/Office/Pages/Clean-Energy-Funds.aspx>

2013 Utility Fuel Mix Reports

- Angela Burrell, angela.burrell@commerce.wa.gov or (360) 725-3120

Every year we collect utility purchasing information on the amount of and type of fuel purchased from plants generating electric power. We combine the data to present a statewide picture of the energy sources used to supply retail customers. Fuel mix disclosures are reports for utilities to distribute to electric utility customers. We sent the final reports to utilities in July 2013. It lets customers know about fuel sources powering their homes. The data is provided by utilities and based on calendar year 2012.

We provide technical assistance to utilities reporting their fuel mix and offer related information that may impact the disclosure efforts. On our website, are the fuel mix reports from 2000-2012, related laws, graphs, and other related information. For more information visit <http://www.commerce.wa.gov/Programs/Energy/Office/Utilities/Pages/FuelMix.aspx>

Electricity, Petroleum & Natural Gas Prices

Energy Price Overview

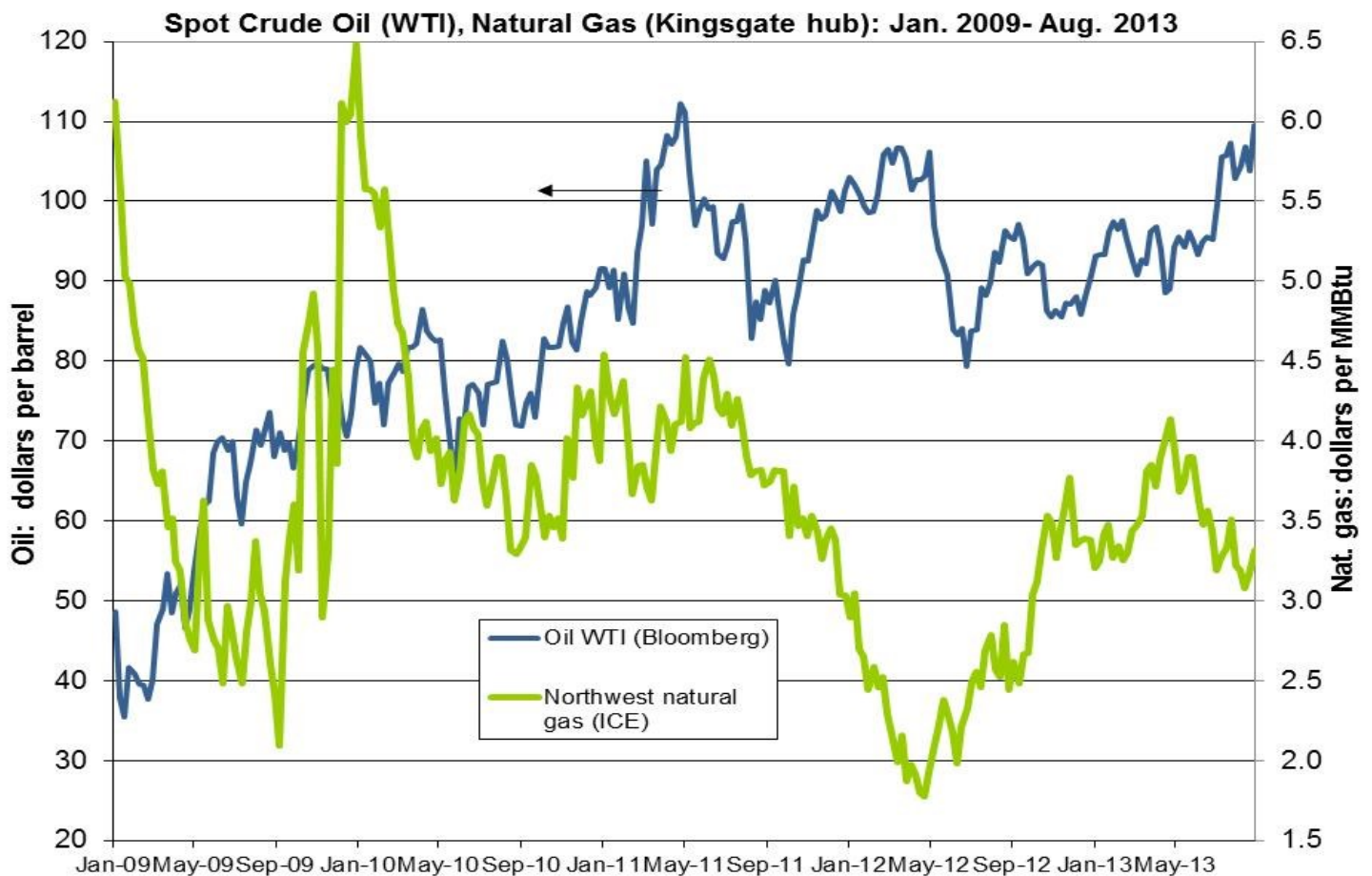
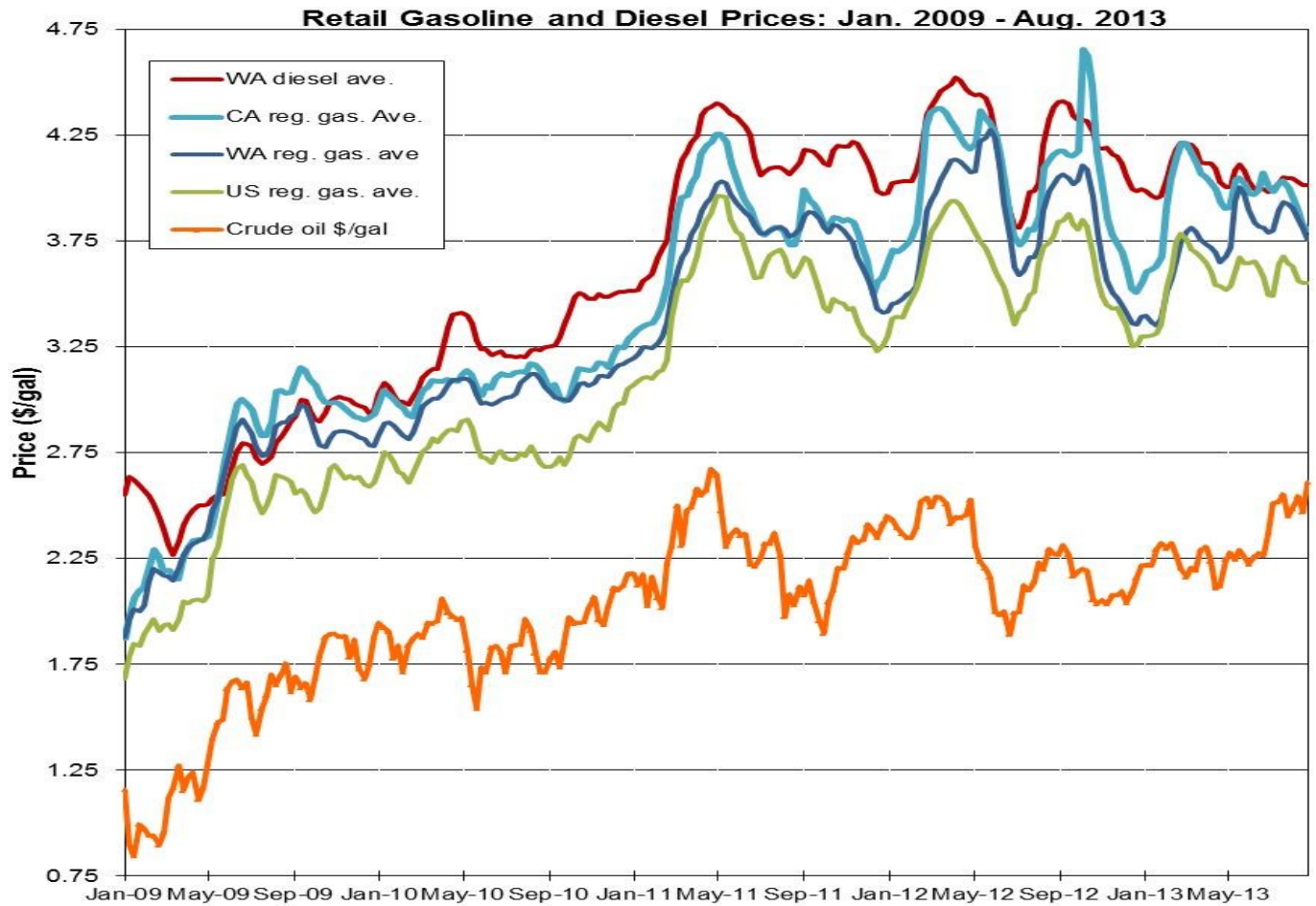
August saw a continuing moderate increase in West Texas Intermediate crude oil price with spot price closing out the month near \$110 per barrel. During the last week of June WTI was about \$95 per barrel. The oil price increase was primarily caused by escalating tensions in Syria and the high probability of a NATO attack over the next several weeks. Syria is not a major oil producer, but is the focal point of a growing Shia-Sunni conflict, which has drawn in oil producers such as Iran and Saudi Arabia. Concerns that the conflict will spillover into other Mideast countries is creating a risk premium for crude oil. A labor strike in Libya and continued sectarian violence in Iraq are also contributing to the concerns amongst the oil traders. The increase in oil price should be fully expressed in the gasoline and diesel prices within a week. In the longer term the commodity market is pricing crude oil much lower—approximately \$90 per barrel two years from now.

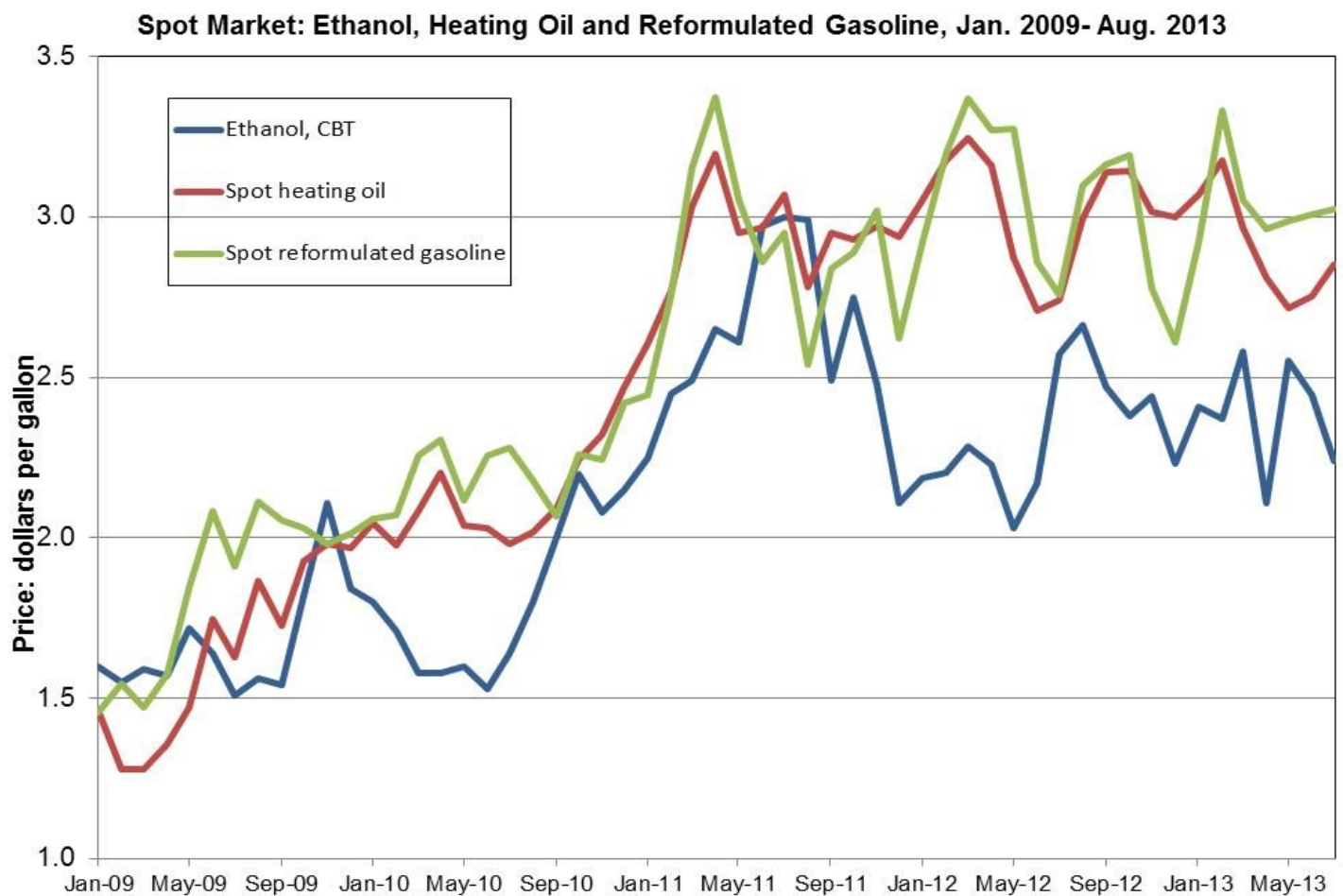
During the last week of August U.S. gasoline and diesel prices averaged \$3.55 and \$3.92 per gallon respectively: 23 and 20 cents per gallon lower than at this time last year. Washington state gasoline and diesel prices averaged \$3.76 and \$4.01 per gallon respectively: 26 and 37 cents per gallon lower than the same week last year. Last year was abnormal for the West Coast because there were several refinery accidents that reduced supply and elevated fuel prices.

The price for front month (one month ahead) NYMEX natural gas was \$3.54 per MMBtu, 10 cents higher than the price seen at the end of July. Locally spot natural gas price at Kingsgate was \$3.32 per MMBtu, up 10 cents from the June spot price. Nationally there was a natural gas storage injection of 67 Bcf. Gas storage levels are 3130 Bcf about 1.5% above the 5-year average, but 7% below the 2012. Gas storage in the West is running 13.1% above the 5-year average.

Regional electricity prices have decreased since last month's report: July's monthly average \$39.2 per MWh versus \$45.8 for the previous month. Temperatures and air conditioning demand have been lower in Southern California. This has reduced demand for spot purchases, and consequently reduced prices, at the Mid Columbia hub.

Energy Price Summary	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	28-44	24-42	-1-24
Average Mid C price (Peak hours \$ MWh)	39.2	45.8	35.8
Electricity WA Retail: May (cents/kWh)	7.02	6.82	0.00
Natural gas spot price (next day: \$ per million BTU)	3.32	3.22	2.45
Natural gas futures (NYMEX next month: \$ per million BTU)	3.54	3.44	2.81
E85 (national average: \$ per gallon gasoline)	3.74	3.82	4.45
Ethanol (CBT next month contract: \$ per gallon)	2.47	2.24	2.66
Corn (\$ per bushel)	5.00	4.89	8.28
Petroleum, West Texas Intermediate: (\$ per barrel)	109.6	102.9	95.5
Seattle gasoline price (\$ per gallon)	3.78	3.95	4.06
Gasoline futures (NYMEX next month: \$ per gallon)	3.05	3.01	3.08
State diesel price (\$ per gallon)	4.01	4.05	4.38
Heating oil futures (NYMEX next month: \$ per gallon)	3.17	3.03	3.11
U.S. residential propane price report (reported Oct.-Mar.)	NA	NA	NA
Clean Cities: Alternative Fuel Price Report, Apr. 2012	US Avg current	West Coast last qtr avg	West Coast current qtr
Ethanol E85 (\$ per gas gallon equiv.)	4.65	4.71	4.98
Biodiesel B20 (\$ per diesel gallon equiv.)	4.19	4.27	4.44
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.72	5.08	4.86
Compressed Natural Gas (\$ per gas gallon equiv.)	2.10	2.39	2.46
Propane (\$ per gas gallon equiv.)	3.77	4.04	4.18





Energy Headlines - If you only have time to read a few articles—read these.

Leaked IPCC Climate Report Excites Skeptics, Annoys Authors. Huffington Post, Aug. 14

http://www.huffingtonpost.com/2012/12/14/leaked-ipcc-report_n_2300558.html

Report: Climate change is impacting California. Seattle Times, Aug. 8.

http://seattletimes.com/html/business/technology/2021565997_apussicaliforniaclimatchange.html

Tesla is now worth \$20 billion. Bloomberg News, Aug 27.

<http://www.businessweek.com/articles/2013-08-27/tesla-is-now-worth-20-billion#r=rss>

WTI crude rises to two-year high on Syrian tension. Bloomberg News, Aug 28.

<http://www.bloomberg.com/news/2013-08-28/wti-crude-rises-to-two-year-high-on-syria-socgen-sees-1.html>

Solar Panels Becoming More Mainstream in the Pacific Northwest. KIRO Broadcasting, Seattle, WA.

<http://mynorthwest.com/11/2332966/Solar-panels-becoming-more-mainstream-in-the-Northwest>

Southern California Edison Tells Customers They Should Pay for San Onofre Shutdown Los Angeles Times.

<http://www.latimes.com/business/money/la-fi-mo-edison-tells-customers-they-should-pay-for-nuke-shutdown-20130812,0,4633495.story>

Energy Headlines—continued

Revamping of 'Ford Pinto' of rail cars urged. Bloomberg News, Aug 28.

<http://www.bloomberg.com/news/2013-08-28/revamping-ford-pinto-of-rail-cars-urged-by-group.html>

Foreseeing trouble in exporting natural gas. New York Times, Aug. 15.

<http://www.nytimes.com/2013/08/16/business/energy-environment/foreseeing-trouble-in-exporting-natural-gas.html?pagewanted=all>

The Passive house: Sealed for Freshness. New York Times, Aug. 15.

<http://www.nytimes.com/2013/08/15/garden/the-passive-house-sealed-for-freshness.html?hpw>

Trash into gas efficiently? An Army test may tell. New York Times, Aug. 18.

<http://www.nytimes.com/2013/08/18/business/trash-into-gas-efficiently-an-army-test-may-tell.html?hpw>

Intermittent nature of green power is challenging for utilities. New York Times, Aug. 15.

<http://www.nytimes.com/2013/08/15/business/energy-environment/intermittent-nature-of-green-power-is-challenge-for-utilities.html?pagewanted=all>

Taking Back Power: Tribes Vie for Control of Hydro Dams. Northwest Public Radio.

<http://nwpr.org/post/taking-back-power-tribes-vie-control-hydro-dams>

Increased Air Conditioning Usage Threatens Global Energy Supply. U-S News & World Report.

<http://www.usnews.com/news/articles/2013/08/12/increased-air-conditioning-usage-threatens-global-energy-supply>

Japan Solar Energy Soars, But Grid Needs to Catch Up. National Geographic Magazine.

<http://news.nationalgeographic.com/news/energy/2013/08/130814-japan-solar-energy-incentive/>

Enviros Not Happy with California Carbon Offsets (Associated Press)

http://www.mercurynews.com/rss/ci_23843662

Severe Heat Waves Are Expected to Double by 2020. U-S News & World Report.

<http://www.usnews.com/news/articles/2013/08/14/severe-heat-waves-are-expected-to-double-by-2020>

White House Solar Panels Being Installed this Week (Washington Post)

<http://www.washingtonpost.com/blogs/post-politics/wp/2013/08/15/white-house-solar-panels-finally-being-installed/>

The Surprisingly Large Energy Footprint of the Digital Economy. TIME Magazine.

<http://science.time.com/2013/08/14/power-drain-the-digital-cloud-is-using-more-energy-than-you-think/>

Why Do Californians Use Less Electricity than Everyone Else? Washington Post.

<http://www.washingtonpost.com/blogs/wonkblog/wp/2013/08/12/why-do-californians-use-less-electricity-than-everyone-else/>

Electric Co-Ops Come out Swinging against Obama Greenhouse Gas Plan. The Hill, Washington, DC.

<http://thehill.com/blogs/regwatch/pending-regs/316605-electric-co-ops-come-out-swinging-against-obama-greenhouse-gas-plan>

Climate panel cites near certainty on warming. New York Times, Aug. 20.

<http://www.nytimes.com/2013/08/20/science/earth/extremely-likely-that-human-activity-is-driving-climate-change-panel-finds.html?pagewanted=all>

A Republican case for climate change action. New York Times, Aug. 1.

<http://www.nytimes.com/2013/08/02/opinion/a-republican-case-for-climate-action.html>

Vermont Yankee Plant to Close Next Year as the Nuclear Industry Retrenches. New York Times, Aug. 28.

<http://www.nytimes.com/2013/08/28/science/entergy-announces-closing-of-vermont-nuclear-plant.html>

Recent Reports on Energy and Climate Change

Monthly Energy Review, EIA, Aug. 2013: <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA, Aug. 2013.: <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA, Aug. 2013.: <http://www.eia.gov/oog/info/twip/twip.asp>

Annual Energy Outlook 2013: <http://www.eia.gov/forecasts/aeo/>

World Bank: 4 Degrees - Turn Down the Heat. Potsdam Institute for Climate Impact Research and Climate Analytics. June 2013.
http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0Full00DOCONF0to0June19090L.pdf

Long-term outlook for nuclear power depends on lifetime of plant, EIA, Apr. 2013
<http://www.eia.gov/todayinenergy/detail.cfm?id=10991>

Environmental Protection Agency 2012 Climate Change Indicators Report.
<http://www.epa.gov/climatechange/science/indicators//>

Report on the First Quadrennial Technology Review, US Dept. of Energy
<http://energy.gov/downloads/report-first-quadrennial-technology-review>

Understanding Household Preferences for Alternative- Fuel Vehicle Technologies. Mineta Transportation Institute. <http://www.transweb.sjsu.edu/project/2809.html>

NRDC report: Keystone pipeline would increase emissions. July 2013.
<http://www.nrdc.org/media/2013/130723.asp>

Redrawing the Energy-Climate Map. International Energy Agency, June 2013.
http://www.iea.org/media/freepublications/executivesummary/WE02013_Climate_Excerpt_ES_WEB.pdf

River & Snow Pack Info

- Observed Aug. stream flow at The Dalles: 95% of average.
- Observed Aug. precipitation above The Dalles: 70% of average.
- Forecast runoff at The Dalles: July 98.5 MAF, 97% average flow
- Estimate of 2012-13 snow pack in July: NA
- Federal hydropower generation in July: 9,601 aMW, 2009-2013 average: 12,705 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): July 93%, 5-year average: 93%.

Power Exchanged

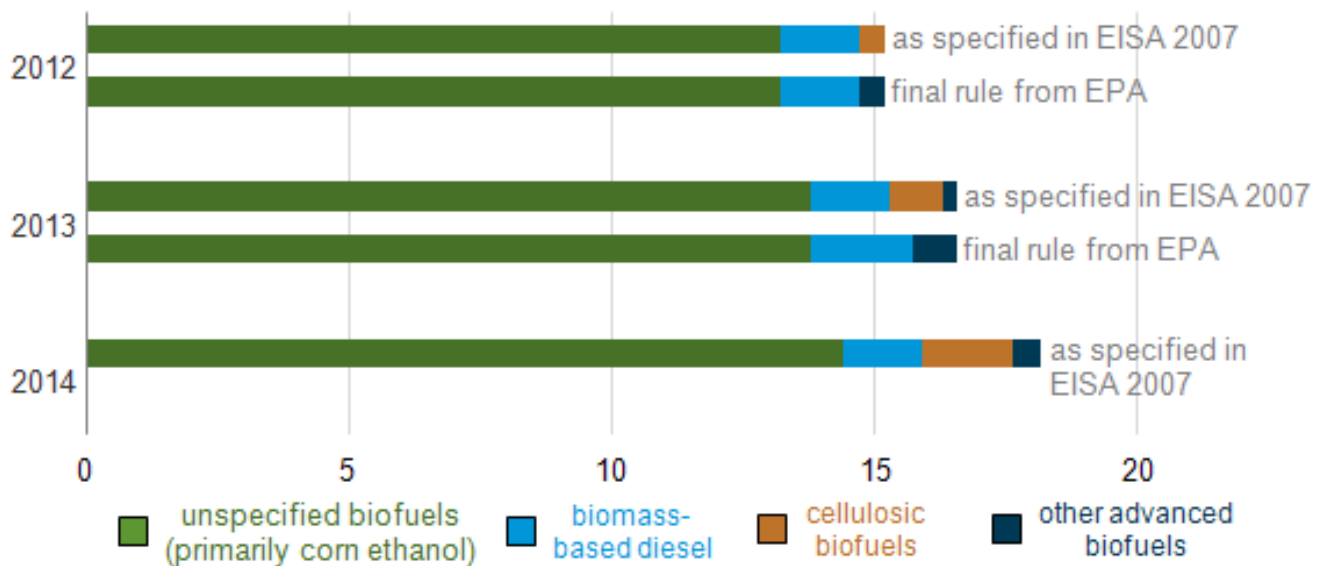
Average flow of power during the last 30 days

- | | |
|----------------------------|---------|
| • California (exported to) | 4115MW |
| • Canada (export to) | 103 MW |
| • Net power exported: | 4218 MW |

Final ruling issued by EPA on Renewable Fuel Standard

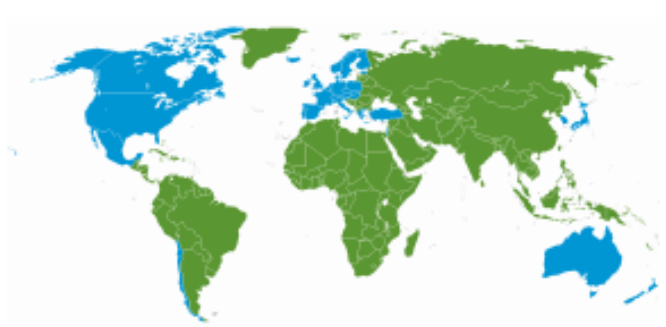
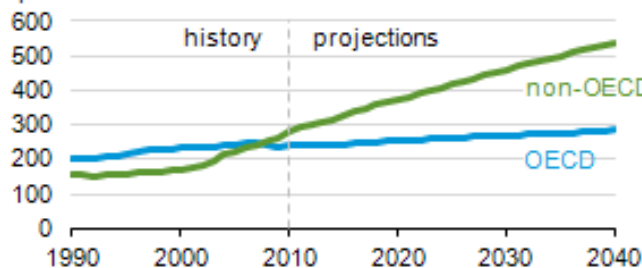
The rule sets a 6 million gallon target for cellulosic biofuels use in 2013. See info at <http://www.eia.gov/todayinenergy/detail.cfm?id=12531>

Renewable Fuels Standard target volumes
billions of gallons of ethanol equivalent

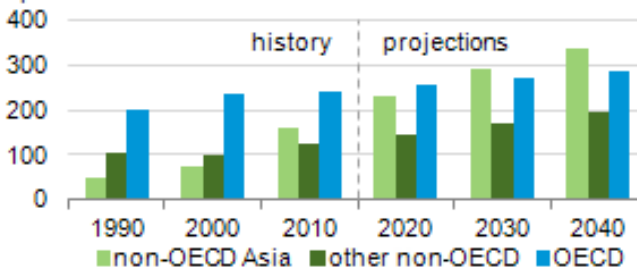


World energy consumption to increase 56% by 2040

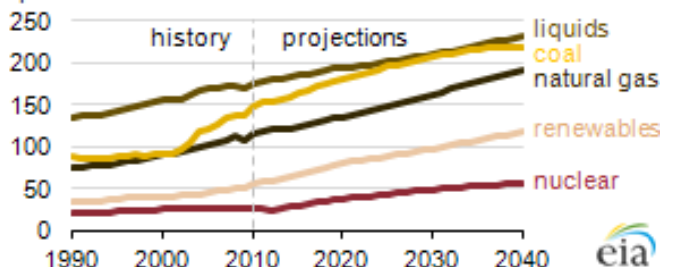
World energy consumption
quadrillion Btu



World energy consumption
quadrillion Btu



World energy consumption by fuel
quadrillion Btu



Washington State Energy Office
1011 Plum St SE
Mail Stop: 42525
Olympia WA 98504-2525

Phone: 360.725.3112

Email: energy_policy@commerce.wa.gov



Department of Commerce
Innovation is in our nature.